A
CATALOGUE
OF
Optical, Mathematical & Philoſophical
INSTRUMENTS,
MADE AND SOLD BY
J. BIDSTRUP,
(No. 36.)
St. Martin's *Street*, *Leiceſter Square*,
LONDON:

OPTICAL INSTRUMENTS.

	£.	s.	d.
THE beſt double-jointed gold Spectacles, with Brazil Pebbles, and nourſe-ſkin gold-mounted caſe	15	15	0
Ditto, ſingle-jointed, with ditto	10	0	0
Beſt double jointed ſilver Spectacles, with pebbles	1	15	0
Beſt double-jointed ſilver Spectacles, with beſt white glaſſes, and Morocco leather caſe	1	1	0
Beſt ſingle-jointed ditto, with pebbles	1	7	0
Ditto, with beſt white glaſſes and Morocco leather caſe	0	13	0
Beſt double-jointed ſteel Spectacles, with beſt white glaſſes and caſe	0	10	6
Ditto,	0	9	0
Second beſt ditto, with caſe	0	7	6
Common ditto	0	4	6
Beſt ſingle-jointed ditto, with caſe	0	4	6
Second beſt ditto	0	2	6
Common ditto	0	1	6
Tortoiſhell Spectacles, with ſilver joints, beſt white glaſſes, and Morocco caſe	0	10	6
Ditto double-jointed, with ditto	0	15	0
Ditto with ſilver ſides and Morocco caſe	1	1	0
Noſe Spectacles, in ſilver	0	7	6
Ditto	0	6	6
Ditto, tortoiſhell and ſilver	0	4	0
Ditto in horn and ſteel	0	1	0
Spectacles for couched eyes—ditto with ſhades—ditto with green glaſſes—ditto with viſual horns, at different prices, according to the frames.			
Spectacle Caſes in variety, and at different prices.			
Concave glaſſes, mounted in ſilver, for ſhort ſighted eyes	0	7	6

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	£	s.	d.
Ditto in horn boxes, tortoiſhell, tortoiſhell and ſilver, pearl and ſilver, mounted in various manners, & at different prices, from 1s. 6d. to	2	2	0
Reading and burning glaſſes, variouſly mounted, from 2s. to	2	2	0
Opera glaſſes mounted with ivory, in caſes, ſmall ſize	0	8	6
Larger ſize	0	13	6
Largeſt	0	17	0
Same ſizes mounted with ivory and ſilver, with one or two ſilver or metal gilt ſliding tubes, in Morocco caſes, from 1l. 1s. to	1	11	6
Improved Operas, with acromatic object glaſſes, which repreſent the objects free from falſe colours, adapted to uſe in the day time as at the playhouſes, from 1l. 8s. to	2	2	0
Perſpectives, with acromatic object glaſs, and one concave eye glaſs	1	1	0
Ditto, with two eye glaſſes	1	3	0
Ditto, larger	1	10	0
Ditto, with four eye glaſſes	1	18	0
Ditto, with four eye glaſſes and a dark glaſs for the ſun, with a ſtand that packs up into the tube	2	18	0
Beſt acromatic teleſcopes (called military) with braſs ſliding tubes, which makes them very portable; the object glaſs warranted the beſt and of the largeſt aperture, one foot long when drawn out, and five inches when ſhut up	2	2	0
Second beſt ditto	1	15	0
Ditto, inferior, and leſs aperture	1	3	6
Beſt ditto, one and half foot when drawn out, and ſeven inches when ſhut up, with warranted beſt object glaſs, and larger aperture	3	3	0
Second beſt ditto	2	15	0
Ditto, inferior, and leſs aperture	1	15	0
Beſt ditto, two feet when drawn out, and nine inches when ſhut up, warranted beſt object glaſs	4	4	0
Second beſt ditto	3	10	0
Ditto, inferior	2	10	0
Beſt ditto, three feet when drawn out, and ten inches when ſhut up, warranted beſt object glaſs	7	7	0
Second beſt ditto	5	0	0
Ditto, inferior	4	4	0
Beſt ditto, four feet when drawn out, and fourteen inches when ſhut up, warranted beſt object glaſs, and largeſt aperture	11	11	0
Second beſt, and with inferior glaſſes, cheap in proportion.			
Acromatic Teleſcopes with mahogany tubes, beſt object glaſſes, and largeſt aperture, one foot long	1	15	0

	£.	s.	d.
Ditto, two feet long	3	10	0
Ditto, three feet	5	15	0
Ditto, four feet	9	9	0
Acromatic Teleſcopes with leſs aperture, from one to eight feet long, at per foot	1	1	0
Common ſtick Teleſcopes, from 10s. 6d. to	2	2	0
Night Teleſcopes two feet long	2	10	0
Improved acromatic night Teleſcopes, to be uſed alſo in foggy weather	4	14	6
An improved thirty-inch acromatic Teleſcope, mahogany tube, with different eye pieces for terreſtrial and celeſtial objects, on a braſs ſtand, packed in a mahogany box	9	9	0
Ditto, the tube of braſs, and with one additional eye piece	10	10	0
Ditto, three and half feet, on a braſs ſtand, with different eye pieces, at 16l. 16s. and	18	18	0
Ditto, with rack work.			
Ditto, ſeventeen inches, the aperture two inches, with a rack work ſtand that packs up into the tube	14	14	0
Ditto, ten inches, the aperture one inch, with a braſs ſtand that packs up into the tube	4	14	6
Ditto, ſeven inches, with ditto,	3	10	0
An acromatic Teleſcope, which by an apparatus inſide can be converted into a Microſcope, at 3l. 13s. 6d. and	4	14	6
Acromatic object glaſs Micrometers of different conſtructions.			
Eye glaſs Micrometers for teleſcopes, to meaſure diſtances with.			
A ſmall inſtrument for meaſuring the magnifying powers of teleſcopes.			
Reflecting Teleſcopes, the mirrors of an improved compoſition, and parabolick figure, by which the objects are repreſented exceedingly clear and diſtinct, fourteen inches long, in mahogany box	5	5	0
Ditto, eighteen inches	8	8	0
Ditto, two feet	12	12	0
Ditto, on a rack work ſtand, ſupporting the teleſcope in the center of gravity, with four magnifying powers	21	0	0
Ditto, three feet, with ditto.			
Ditto, with ſix magnifying powers	36	15	0
Ditto, without rack work	22	1	0
Ditto, four feet long, on ſtands variouſly conſtructed and fitted up for the moſt accurate aſtronomical purpoſes, according to their different prices, from 40l. to	100	0	0
A ſeven feet Newtonian Teleſcope, the diameter of the mirror ſeven inches, on a ſtand, with rack work motions, &c.	94	10	0

	£.	s.	d.
A ten feet ditto, the mirror ten inches in diameter.			
Microſcopes of different conſtructions, and to different prices, from 5s. and upwards.			
Wilſon's pocket microſcope	2	12	6
Ellis's ditto for equatic objects, with the addition of Wilſon's	3	13	6
A compound pillar Microſcope, in a mahogany box	5	15	6
A ditto	6	6	0
A ditto, neatly packed in a tea cheſt mahogany box	7	7	0
A ditto, of the beſt workmanſhip, the box neater, and lined with velvet	9	9	0
Solar Microſcopes	4	14	6
Ditto	5	15	6
Ditto, larger, with improved apparatus for opake and tranſparent objects, from 12l. 12s. to	21	0	0
Botanic and cloth Microſcopes, from 5s. to	1	11	6
Magnifying Glaſſes for botanical and other purpoſes, from 2s. to	1	11	6
Scioptic balls and ſockets, from 10s. 6d. to	1	11	6
Magic Lanthorns of different ſizes, from 7s. 6d. to	1	11	6
Sliders for ditto, to different prices.			
Optical machines for viewing prints, from 10s. 6d. to	1	15	0
Camera Obſcuras for the pocket, from 8s. 6d. to	3	3	0
Book and pyramidical Camera Obſcuras, from 3l. 3s. to	6	6	0
Glaſs Priſms, from 7s. 6d. to	1	1	0
Ditto in frames.			
Concave and Convex Mirrors, in black frames, from 9s. to	16	16	0
Cylindrical ditto, according to their ſize.			

ASTRONOMICAL and GEOGRAPHICAL INSTRUMENTS.

(including thoſe for Surveying, Levelling, Drawing, &c.)

Aſtronomical Quadrants, from one foot radius to eight feet, according to their different conſtructions, from 30l. to	800	0	0
Circular Inſtruments, on the moſt improved conſtruction, according to their diameters.			
Tranſit Inſtruments.			
Zenith and Polar Sectors.			
A new improved Circular Inſtrument, of one, two or three feet diameter, with two teleſcopes, weights to balance it, &c. various adjuſtments; exceeds aſtronomical quadrants and theodolites for accuracy; anſwers the purpoſe of both; from 40l. to	150	0	0
Equatorial Inſtruments, of lateſt improved conſtruction, from 42l. to	420	0	0
Globes, according to their diameters, from three to twenty-eight inches, and variety of mountings, from 1l. 11s. 6d. the pair, to	52	10	0
Three inch Globes for the pocket	0	10	6

	£.	s.	d.
A ſmall Quadrant, with horizontal and vertical motion	0	16	0
Ditto in braſs, made and graduated with more accuracy	2	10	0
ORRERIES, from 17l. 17s. to	1000	0	0
Improved Planetaria with wheel work.			
New Inſtruments which illuſtrate the phænomena of the ſeaſons, the moon, and the cauſes of eclipſes.			
A Manual Planetarium and Tellurian	3	13	6
Cometaria, ſhewing the motions of comets.			
Other Planetaria and Orreries made in variety, with wheel work motions, illuſtrating the phæhomena of the planets, the cauſes of their ſtationary appearance, and their direct and retrograde motions, &c. at different prices.			
Armillary Dialling Spheres.			
Armillary Spheres, ſhewing the real and apparent motion of the heavens.			
Horizontal Sun Dials, from 6l. 6s. to	14	14	0
A univerſal Sun Dial and equatorical, from 7s. 6d. to	31	10	0
Univerſal Ring Dials, of various ſizes, and at different prices, from 7s. 6d. and upwards.			
Surveying Inſtruments, made in different manners, and at various prices.			
Theodolites, or Inſtruments for meaſuring angles, diſtances, &c. from the ſimpleſt to the moſt accurate conſtruction, with or without teleſcopes, from 4l. 4s. to	27	6	0
A large Theodolite with lateſt improvements, two teleſcopes and every requiſite adjuſtment for the moſt accurate purpoſes	29	8	0
A ſmall four-inch Theodolite, with teleſcope and various adjuſtments	21	0	0
A ditto of very beſt workmanſhip.			
Circumferentors fom 2l. 2s. to	4	4	0
An improved Circumferentor, contrived to anſwer various purpoſes.			
Surveying Croſſes, from 10s. 6d. to	2	10	0
Plain tables, with ſtaff, &c.	3	3	0
Ditto, improved.			
Caſes of Drawing Inſtruments, from 10s. 6d. to	10	10	0
Protractors for laying down angles, at different prices.			
Ditto, with nonius and moveable limb.	2	2	0
Ditto, with teeth and pinion.	4	4	0
Parallel Rulers, Sectors, Plotting Scales, &c.			
Meaſuring Wheels	6	6	0
Pedometers for aſcertaining diſtance in walking.			

	£.	s.	d.
Meaſuring Chains and Tape Boxes, according to their length.			
Gunter's Chain	0	7	6
Proportional, elliptical, ſpiral, and triangular Compaſſes.			
Beam Compaſſes for deſcribing large circles, and laying down diviſions.			
Gunner's Quadrants, Callipers, and all other inſtruments for military purpoſes.			
Teleſcopes for meaſuring diſtances at one ſtation.			
Small ſurveying Compaſſes, with ſights.			
Miners' Compaſſes.			
Teleſcopes for levelling, from 4l. 4s. to	10	10	0
Spirit Levels, with plain ſights	1	11	6
Station Staves, with ſliding vanes, for levelling.			
Pantographs, for copying drawings.			
Ditto, of beſt workmanſhip, and warranted accurate	6	6	0

NAUTICAL INSTRUMENTS.

	£.	s.	d.
Teleſcopes to be uſed at ſea.			
Night Teleſcopes.			
Hadley's Octants, in mahogany frames, from 1l. 5s. to	1	17	6
Ditto, in ebony, with ivory arch and nonius diviſion	2	2	0
Ditto, with adjuſting ſcrew to the index and horizon glaſs	3	3	0
Hadley's Sextant, in mahogany or ebony, with ivory arch, adjuſting ſcrew, and a teleſcope, at 4l. 4s. and	5	5	0
Ditto, of better workmanſhip, with a braſs arch, two ſets of dark glaſſes, adjuſting ſcrew, and teleſcope	7	7	0
Hadley's Sextants, in braſs, on a peculiar conſtruction for lightneſs, with new improvements, two teleſcopes, &c. warranted perfect for the moſt accurate obſervations, neatly packed in a mahogany box	10	10	0
Ditto, ditto, nine-inch radius	9	9	0
Ditto, ditto, ſix-inch radius	8	8	0
Ditto, ditto, of the above ſizes, with ſilver-plated limb, from 9l. 9s. to	12	12	0
Sextants, of bell-metal, with ſame improvements, prices as above.			
A neat four-inch Sextant, in braſs, with magnifier, two teleſcopes, &c. warranted perfect	8	8	0
Ditto, ditto, with ſilver-plated limb	10	10	0
Sextants, fitted upon pillars and other ſtands, of various conſtructions, which makes them very uſeful for land obſervations.			
An improved Hadley's Sextant, fitted upon a pillar and ſtand, with proper apparatus to adjuſt it for the niceſt aſtronomical obſervations on land, independent of the true or any detached horizon; fully anſwers			

	£.	s.	d.
the purpoſe of the theodolite, and being ſeparated from its ſtand, can be uſed as other Sextants at Sea.			
Steering Compaſſes, with lateſt improvements, from 18s. to	2	2	0
Azimuth Compaſſes, of different conſtructions, from 5l. 5s. to	10	10	0
Pocket Compaſſes.			
Artificial Horizons.			
Ditto, on improved principles.			
Marine Barometers.			
Circular inſtrument, anſwering the purpoſe of ſextants.			
Dipping Needles, from 10l. 10s. to	29	8	0
Variation Compaſſes, from 2l. 2s. to	20	0	0

PHILOSOPHICAL INSTRUMENTS.

	£.	s.	d.
A ſmall Electrical Machine, with ſelect apparatus	7	7	0
A ditto, for medical purpoſes	6	6	0
A ditto, for ditto, the cylinder ten-inch diameter, with ſelect apparatus, packed in a box	10	10	0
Improved Electrical Machine, from 3l. 3s. to	36	15	0
Electrical Batteries, from 2l. 2s. and upward.			
Electrical Jarrs, of different ſizes.			
Ditto, with an electrometer, from 10s. 6d. to	1	1	0
Quadrant Electrometers, jointed diſchargers, luminous conductors, &c. with all other parts of electrical apparatus, on the neweſt and moſt improved conſtructions.			
Small ſingle barrelled Air-pumps	2	2	0
Double ditto	4	10	0
Ditto, ditto, larger	6	10	0
Table Air-pumps	10	0	0
A double barrelled Air-pump, with condenſing engine.			
The American double barrelled Air-pump, with lateſt improvements, exceeding any yet contrived for exhauſting more accurately.			
Apparatus to an Air-pump, from 3l. 3s. to	26	5	0
Exhauſting and condenſing Syringes, from 10s. 6d. to	1	11	6
Air Fountains, of copper, with various jets, from 3l. 10s. to	6	16	6
Barometers, differently mounted, from 1l. 11s. 6d. to	5	5	0
Ditto, for meaſuring the altitude of mountains.			
Thermometers for various purpoſes, from 9s. to	3	3	0
De Luc's Hygrometer.			
Hygrometers with the beard of wild oats.	0	10	6
Hygrometers for aſcertaining the ſtrength of ſpirituous liquors, from 1l. 6s. to	2	15	0
Eudiometers, Pyrometers, &c.			
Hydroſtatic Balances, from 1l. 1s. and upwards.			
Apparatus for Hydroſtatical experiments.			

	£.	s.	d.
The Mechanical Powers for demonſtrating the laws of motion, gravity, &c. neatly made in braſs, conſiſting of the balance, ſingle and compound pulley, levers, the inclined plane, wheel and axle, the ſcrew, wedges, weights, &c. compleat, at 21l. and ——	26	5	0
The ſame, made on a larger plan.			
Atwood's Apparatus for demonſtrating the laws of accelerated and retarded motion ——	25	4	0
Separate ſets of Pullies, of various conſtructions and combinations.			
Small Carriages, inclined Planes, Wheels of different ſizes, &c. for experiments on Wheel Carriages.			
A variety of Models and other Apparatus, made for demonſtrating the laws of motion, gravity, central forces, preſſure of fluids, equilibrium, &c. too numerous to be inſerted in a ſmall catalogue.			
An Apparatus for making experiments on magnetiſm, from 2l. 2s. to —— ——	14	14	0
Artificial Magnets in bars.			
Ditto, horſe-ſhoe.			
Compound Magnets, from 1l. 1s. to ——	20	0	0
Conductors for Ships and Houſes, to preſerve them from Lightning —— —— ——	5	5	0

Beſides the preceding, J. BIDSTRUP makes all kinds of Inſtruments, either from particular given drawings, or as deſcribed by the different writers upon Mathematics, Philoſophy, Chemiſtry, &c. and as every inſtrument from the loweſt to the moſt accurate and expenſive, is finiſhed under his immediate inſpection, he can warrant them perfect, and ſuch as can be depended upon, for the moſt accurate obſervations. Mathematical Inſtruments ſpeak for themſelves, and although much may be ſaid in favour of name, and long eſtabliſhments, he truſts his will bear the ſtricteſt ſcrutiny, and be found at leaſt equal to any made in Europe, according to their different prices. Thoſe who may have commiſſions from abroad, and will favour him with their orders, he will be reſponſible to for the perfection of his work, and that his charges are as low as any in London.—Old Inſtruments taken in exchange for new ones, or judiciouſly repaired. Obſervatories, Military and Nautical Schools, or Academies in this Country or Abroad, furniſhed with Inſtruments on the moſt reaſonable Terms, and without that uſual delay which is generally complained of. Merchants, Shopkeepers, Schoolmaſters, and others, who ſell again, ſupplied with conſiderable allowance.

Letters punctually attended to.